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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KRASS, FREDERICK F

ART UNIT	PAPER NUMBER
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1614

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,917

Applicant(s)

MONTGOMERY, R. ERIC

Examiner

Frederick F. Krass

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4-4-05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-42, 45, 48, 51, 52 and 59-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45, 48, 51, 52 and 59-72 is/are allowed.
- 6) ☒ Claim(s) 28-41 is/are rejected.
- 7) ☒ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Status of Case

All previous rejections are withdrawn.

A new ground of rejection follows infra. Since it was not necessitated by Applicant's amendment, this action is NON-FINAL. (The rejection is based on the examiner's reassessment of art already applied. The delay in prosecution is regretted).

Claim Informalities

Claim 37, penultimate line, the first word on the line is clearly spelled incorrectly and should be changed to --- tripolyphosphate ---.

Anticipation Rejection

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28-34 and 36-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa et al (USP 3,901,819).

The prior art discloses compositions comprising:

i) a source of hydrogen peroxide, e.g., hydrogen peroxide, sodium perborate, sodium percarbonate, etc. (col. 2, lines 45-51); and

ii) a bleaching activator comprising an acetic acid ester of a polyhydric alcohol, preferably glycerine triacetate (triacetin: col. 2, lines 12-15).

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Since the prior art compositions contain the same combination of bleaching agents and bleaching activators as Applicant's – all highly reactive species - they must inherently generate at least some peroxyacetic acid upon contacting water. The peroxide and bleaching activator are in fact combined together with an anhydrous carrier prior to adding to water, as disclosed at col. 2, lines 30-45. See also working example 3. (Note that this is contrary to the position taken previously by the examiner, who apologizes for the previous misinterpretation).

As is clear from col. 2, lines 30-45 of Nakagawa et al, the prior art:

- i) discloses polyethylene glycol, recited by instant claim 33, as the preferred anhydrous carrier;
- ii) discloses amphoteric (zwitterionic) surfactants, recited by instant claim 39;
- iii) discloses sodium tripolyphosphate, recited as a buffering agent by instant claim 37 (it is also a polyphosphate chelating agent as required by instant claim 41);
- iv) discloses chelating agents (e.g., sodium nitrilotriacetate) as more generally recited by instant claim 40; and
- v) discloses redeposition-preventive agents (i.e., thickeners) such as carboxymethylcellulose and corn starch (see working example 3), as recited by instant claim 34.

Note also that all of these components are non-toxic and thus "orally acceptable", which is sufficient to meet that limitation of the instant claims (even though the prior art does not specify oral uses). Note also that the prior art compositions fall within the scope of instant claims 31 and 32, because those claims merely require that the compositions be "capable" of providing certain acid pH values (not that they actually do so). The prior art compositions are "capable" of doing so, either inherently (through the in situ generation of peroxyacetic acid), or through further addition of an appropriate amount of acid.

Obviousness Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al (USP 3,901,819) in view of Kuroda et al (USP 4,526,698).

The primary reference is discussed in the "Anticipation" section supra, and differs from the instant claims insofar as although it generally discloses redeposition-preventive agents (giving carboxymethyl cellulose as an example), it does not specify those particular species recited instantly, e.g., polyvinylpyrrolidone.

The secondary reference teaches that polyvinylpyrrolidone (as well as carboxymethyl cellulose) is a known antiredeposition agent for inorganic bleaches. See col. 13, lines 3-7. Because the reference is cited for its general teaching, it differs from the instant claims insofar as it is silent regarding an acetic acid ester of glycerin.

It is well-settled law that it is generally obvious to incorporate a known ingredient into a claimed composition with the expectation of obtaining its known function. See for example In re Linder, 457 F.2d 506, 507 (CCPA 1972), and In re Dial, 326 F.2d 430, 432 (CCPA 1964).

Consonant with such reasoning, it would have been obvious to have incorporated polyvinylpyrrolidone into the primary reference bleaching compositions, motivated by the expectation of obtaining its art recognized redeposition-preventive activity as taught by the secondary reference.

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Allowable Subject Matter

Claims 45, 48, 51, 52 and 59-72 are allowable as present advised.

Claim 42 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Method claims 45, 48, 51 and 52 remain allowable for the reasons outlined in the previous Office action.

Composition claims 59-72 are allowable as presently advised. USP 3,901,819 does not generally specify the amount of anhydrous carrier used. Working example 3 discloses anhydrous bleaching powders comprising 30 percent peroxide, more than twice the amount required by instant claim 59. Furthermore, the amount of carrier in working example 3 is far less than the minimum of 79.0 percent by weight required by instant claim 59.

The prior art provides no direction for using a low proportion of bleaching active and high proportion of anhydrous carrier as recited by instant claims 59-72. Moreover, the prior art is explicitly concerned with lowering bleaching temperatures (col. 1, lines 6-8, for example), and further teaches that the lower the temperature used, the higher the relative proportion of bleaching agent required. See col. 2, lines 55-61. Accordingly, the prior art not only provides no motivation to prepare compositions having a relatively high percentage of anhydrous carrier, it actually teaches away from same. Moreover, given that prior art teaching, it is unexpected that the instant compositions are so effective as tooth bleaching agents, since tooth bleaching is a relatively low temperature application.

Note also that because the bleaching compositions of USP 3,901,819 are used for such industrial applications as fabric bleaching, the prior art would not fairly suggest, teach or disclose adding a flavoring or sweetening agent thereto, as required by instant claim 42.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Krass whose telephone number is 571-272-0580. The examiner's schedule is as follows:

Monday: 10:30AM- 7PM;
Tuesday: 10:30AM - 7PM;
Wednesday: off;
Thursday: 10:30AM- 7PM; and
Friday: 10:30AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached at 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick Krass
Primary Examiner
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